(22A)

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Title

Hydrodynamic kaolin **dispersion** - starts with degassing in developed cavitation regime followed by hydrodynamic cavitation and injection of gas.

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Patent Information

SU 1590135 A 19900907 (199119)*

Application Information

SU 1988-4608628 19881125

Priority Application Information

SU 1988-4608628 19881125

Abstract

SU 1590135 A UPAB: 19930928
Increased **dispersion** of kaolin and lower power intake in the process are ensured with the preliminary suspension moving at a rate of 5-8 m/sec. The degassing is carried out in the regime of developed cavitation in the range of cavitation number of 1-6, and with supercavern length equal to 25-40 of its diameters. The process lasts 1-1.2 sec., and is followed by the hydrodynamic cavitation treatment with cavitation number of 0.6-1.5. The operation with shock waves in the suspension moving at a rate of 12-14 m/sec is preceded by admitting gaseous agent inert with respect to the kaolin and fed in amts. equal to 10-15% of the suspension volume.
The water and kaolin of a given ratio are fed constantly into the receiving buffer tank, and a pump transfers the suspension to the degasser at a rate of 5-8 m/sec. The suspension is acted upon by the conical cavitator behind which unstable caverns are formed. The gas content of the suspension is then reduced to 1% of its volume and allows more intense cavitation regime to be applied for further **dispersion**. The caverns collapse and give rise to a cumulative stream running at 1500 m/sec.
USE/ADVANTAGE - Treatment of non-ore minerals, esp. clay. The treatment results in decreasing kaolin particles to submicron size while reducing the specific power intake. Bul.33/7.9.90
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Accession Number

1991-138790 [19] WPINDEX